Global Horizon
TRAINING CENTER

Training Course:
Fiber Optic Advanced Splicing

29 December 2024 - 2 January 2025
Alexandria (Egypt)

Training Course:
Fiber Optic Advanced Splicing

Training Course code: SC234830 From: 29 December 2024 - 2 January 2025 Venue: Alexandria (Egypt) - Training Course Fees: 4345 Euro

Introduction

This Fiber Optic Advanced Splicing training course is designed for those who layout, install, or maintain fiber optic cabling systems.

It identifies you as a Fiber Optic Advanced Splicing able to demonstrate a practical knowledge of fiber optic theory, codes, standards, and practices widely accepted in the fiber optics industry.

In addition, this training incorporates two days of individual hands-on training validating fiber optic installer skills, including fiber terminations, cable preparations, fusion splicing, OTDR, and optical loss testing.

Training Objectives

Fiber Optic Advanced Splicing training will provide the participants with the necessary knowledge and skills to:

- Layout, install or maintain fiber optic cabling systems
- Demonstrate a practical knowledge of fiber optic theory, codes, standards, and installation practices
- Demonstrate a practical knowledge of individual hands-on skills including:
    - Performing industry standard fiber optic terminations
    - Preparing cables for inside and outside applications
    - Performing fusion splicing and splice tray preparation
    - Testing with the OTDR and optical loss test equipment

Training Methodologies

This Fiber Optic Advanced Splicing training workshop consists of theoretical and technical procedures and methods for fiber optic mechanical and fusion splicing applications.

Participants will learn all aspects of fiber optics focusing on splicing techniques with hands-on practice, examples, and exercises.

Prerequisites

Knowledge or experience in the areas of Fiber Optic Advantages and Applications, Cables, Connectors and Terminations, Enclosures and Panels, and Test Equipment would be helpful but is not required.

Target Audience

Fiber Optic Advanced Splicing is designed for new or experienced personnel seeking a deeper understanding of the installation of fiber optic cabling systems.

This course is excellent for anyone involved in the construction, education, commercial, industrial, or utility markets and anyone who designs, installs, maintains, or tests fiber optic cabling systems.

Course Content

Day 1

Introduction to Fiber Optics

- Networking
- Fiber Optic Advantages and Applications
- Terminology and History
- The Fundamentals of Light Propagation
- Scales of Measurement and the Spectrum
- Characteristics of Single mode and Multimode
- Manufacturing, Bandwidth, and Linear Effects

Cables

- Optic fiber construction
- Cable Types, Construction, and Specifications
- Cable Marking
- Selection Criteria

Connectors and Terminations

- Temporary and Permanent Connections
- Connector Types
- Performance Specifications
- Connector Loss Issues
- Splicing Applications

Day 2

Splicing

- Fusion and Mechanical
- Fusion Splicing
- Cable Marking
- Mechanical Splicing

Enclosures and Panels

- Distribution, Patch, and Splice Types
- Application Issues and Selection Criteria
- Aerial and Burial Enclosures
- Re-Entry and Expansion Capabilities
- Routing and Preparation

Test Equipment

- Loss Testing Tools and Equipment
- Standards and Methods
- Return Loss, Bandwidth, and Dispersion
- OTDR Theory and Applications
- Loss and System Budget Calculations

Day 3

Restoration and Maintenance

- Tools and Equipment
- Practical Applications
- Time Saving Techniques
- Record Keeping and Documentation

System Components and Design Issues

- Transmitters and Receivers
- Passive Optical Components
- Couplers and Splitters
- WDM and DWDM Issues

Day 4

Lab Workshop:

Fusion Splicing

- Properly prepare an inside plant cable for mounting into a splice tray.
- Demonstrate the proper way to strip, clean, cleave, and fusion splice 900µm fiber.
- Properly pre-trim the individual fibers into the splice tray before fusion splicing.
- Properly set up and fusion splice the individual fibers together.
- Properly wrap form & dress the individual fibers back into the tray.

Mechanical Splice Connector

- Properly prepare a simplex cable for this connector termination method.
- Properly use a precision cleaver for this termination method.
- Successfully mate a cleaved cable end into a mechanical splice-on connector.
- Test the assembly to TIA Tier 1 standard.

Day 5

Mechanical Splice

- Perform a mechanical splice with < .3 dB of attenuation
- Explain the benefits of Index Matching Gel
- Use a precision cleaver to prepare fibers for splicing.
- Calculate A-B and B-A loss.

Pigtail Fusion Splice

- Perform a fusion splice with .1 dB of attenuation
- Use a precision cleaver to prepare fibers for splicing.
- Calculate A-B and B-A loss.

Registration form on the Training Course: Fiber Optic Advanced Splicing

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
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Company Information

Company Name: .....
Address: .....
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Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
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Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
- ☐ Please invoice me
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Easy Ways To Register

Telephone: +201095004484 to provisionally reserve your place.	Fax your completed registration form to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.